COLOPHON 2013

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In 2010 the Mimar Sinan University of Istanbul started a research project on the Ionian town of Colophon which is conducted in close collaboration with the University of Vienna [1]. It aims at the exploration of the ancient urban area as well as on the distribution of the necropoleis. For the campaign of the year 2013 the Austrian research team concentrated on the following topics [2].

1. Survey in the area of the ancient city

This year, the main focus of the investigations in the area within the fortification walls was laid on the exploration of the urbanistic organisation of the city by magnetic survey and by ground penetrating radar. For this purpose two areas were chosen. The first area consisted of fields in the plain between the brooks Kabaklidere and Kurudere in the north eastern quarters of the ancient city. Here the existence of houses has been proven by excavations by the museum of Izmir about 10–15 years ago. The remains of walls were also visible in several trenches opened by illegal diggers both on the plains and in the forested area near the slopes of the surrounding hills. The geophysical prospection confirmed the assumed existence of several buildings and streets in the area. In addition we conducted an extensive survey in adjacent fields and collected pottery from the holes dug by illegal diggers. The finds included roof tiles and a small amount of pottery with a chronological range from the 6th to the 4th c. BC. A detailed documentation of the present land-use and land-division of this area, already begun in 2012, was continued with the aim of a diachronical understanding of the landscape's historical development. This included the description of modern features in the fields as well as interviews with owners and tenants.

The second area chosen for a geophysical prospection is situated to the south of the Halil Ağa Tepesi, where W. Höpfner proposed to locate the ancient agora [3]. Both magnetic survey and ground penetrating radar prospections were carried out here. Further examination of the data is currently being carried out. The exemplary geophysical prospection will give important insights into the organisation and layout

of the ancient city and builds the basis for the creation of a preliminary town plan of the parts of Colophon situated on the plain between the city's hills.

2. The Necropoleis

2.1. The South Necropolis

In 2012 about 18 burial mounds with diameters ranging from 5 to 10m have been identified in the area south of the city. The burial mounds are sparsely distributed with a distance of about 10–40m from each other, located on the slope of the Kale Tepesi south of the city wall. Most of the burial mounds had already been robbed, but some had apparently been laid open by systematic excavation that removed most of their fillings to completely uncover the outer walls and graves within. These excavations seem to have been carried out by the museum of Izmir in the 1990s. This year we concentrated on the detailed documentation of two of those previously excavated mounds, the large and well preserved Tumuli 6 and 7, located 560m to the south of the city wall. Unlike the other mounds of the necropolis these two form a close pair, being only a couple of meters apart from each other. The two mounds with a diameter of ca. 9m consist of stone walls, with relatively large blocks of rectangular dolomite rock, measuring on average 0.6-0.8 x 0.3-0.4 x 0.3-0.5m and up to 1.28 x 0.60 x 0.50m, building the outer face of the wall. A combination of tightly packed medium to smaller rubble stones is reclining against those outer large blocks on the inside. The material inside the tumuli has mostly been removed, occasionally leaving the bare bedrock visible within.

The building material is composed almost entirely of dolomite rock that was most likely won with relative ease from the immediate area in the vicinity of the mounds, but no traces of these quarries could be identified with any certainty (see below). Very few singular examples of other locally available stone could be identified, but the vast majority of the material, and in particular all regular blocks, were of the same dolomite variety. Both tumuli are surrounded by large and irregular heaps consisting mostly of small stones and a reddish, sandy soil, which probably stem from the excavation and originally were part of the mounds' filling. The measurements of the stone heaps will hopefully allow for an approximate reconstruction of the height of the mounds at the time of the excavation.

Tumulus n. 7 differs from n. 6 by the regularity of the masonry. In its interior three graves measuring about 2.0 x 0.4m lay open, all adjacent to the inner walls of the

tumuli and distributed almost evenly along the perimeter. The graves were partially cut in the rock and partially build of small, flat stones. Only for one tomb some of the stone slabs originally covering the tomb were found in situ on top of the grave.

Tumulus n. 6 was not as well preserved as its neighbour and all traces of the assumed grave(s) in its interior have evidently been destroyed by previous excavations or grave robbers. While Tumulus n. 7 lacks any signs of an entry (*dromos*) or later modifications, in the southern part of Tumulus n. 6 two walls prolonging southwards from the Tumulus formed a structure that was originally perceived by us as a sort of entryway into the mound or possibly a later addition to it. Closer examination however showed the “walls” to be made up entirely of a mixture of very loose stones and top soil. At this point it seems more likely to see in this material refuse from the prior excavation. Using several blocks partially visible in the topsoil layer, Tumulus n. 6 should thus rather be reconstructed as a round shape of approximately 9m diameter. The mound would then be almost identical in size and shape to Tumulus n. 7, only far more crudely built and far worse preserved. The difference in building technique probably allows for a chronological distinction between the two, though the lack of any form of stratigraphic connection and the lack of find materials seems to make any further differentiation impossible.

To the Northwest of Tumulus n. 6, almost adjacent to the outer wall, a rectangular incision cut into the bedrock and measuring 2,3 x 0,5m is clearly visible. No traces of a burial remain, but the size of the incision suggests it once contained the inhumation of an adult. The close grouping of the Tumuli n. 6 and n. 7 and this rock-cut grave suggests that the entirety of those three tombs can be conceived as an interrelated structure. Differences in the building technique of the tumuli and the apparent addition of the single grave next to Tumulus n. 6 suggest that the complex evolved over a longer period of time and was not built simultaneously. No skeletal remains or artefacts of any kind could be found within the structures. The few stray finds in the vicinity of the mounds couldn’t be connected with certainty to the complex, but due to the typological differences with the known Geometric tombs in the North-East Necropolis (see below), the evidence of inhumation burials in general as well as the history of the city of Colophon, an estimated dating of the complex between the Archaic and early Hellenistic times seems plausible. A superficial survey of the remaining area of the Southern Necropolis showed the other burial mounds to be

mostly of a similar type, with occasional apparently robbed rock-cut graves being visible adjacent to them.

2.2. The North-East Necropolis

The North-East Necropolis was already identified in 2010 and 2012, when we located the tombs “Mound I” and “Mound II”, explored by the American excavations of 1922, and suggested the existence of at least eight additional burial mounds to the east of them [4]. According to the American excavation notebooks the particularly large burial mounds of the North-East necropolis, ranging in diameter from 25 to 30m, contained cremation graves and find material from the Geometric period [5]. Unlike the two excavated mounds of the South Necropolis that were composed of standing walls, the Geometric mounds were mainly built from large accumulations of earth covering one or more primary cremations dug into the earth and sometimes reinforced with stone. American excavators noticed the presence of small portions of rectilinear stone walls which might be, for some part, unexcavated cremations, but also could be the remains of some kind of enclosure [6].

The survey of this year documented about 40 small robber trenches in the area, which might be taken as indication of further graves that were also already briefly mentioned in the American notebooks. The nature of this necropolis remains extremely difficult to comprehend today, as the area was seemingly stripped of topsoil to build a dam along the Kurudere brook, thus destroying the upper part of possible further burial mounds. The slight elevations that can today still be seen in the landscape therefore probably only represent a considerably diminished form of the formerly quite large burial mounds. The exact boundaries and extension of the Geometric necropolis thus remain unknown, but the area extending from the slope of the Yaren Tepesi to both sides of the Kurudere can probably be reconstructed as a wide field containing several large and clearly separated burial mounds surrounded by smaller groups of graves without any elaborate surface markings.

Of particular interest was the stray find of a fragment of a misfired tile that could be taken as an indication of a possible workshop area outside of the city walls. We also conducted a magnetic survey prospection in this area, suited for the discovery of kilns, but the interpretation of the results is still pending.

2.3. Further necropolis areas

Further investigations were made to locate other burial mounds or tombs excavated in 1922 and 1925 by comparing the photographs of the American documentation to the modern landscape. They succeeded in locating the area of the Mycenaean tomb excavated in 1922 by Hetty Goldman to the north-east of the modern village of Değirmendere. The tomb is no longer visible in the landscape since at least 1972, when R.A. Bridges tried to locate it [7]. In their campaign of 1925 the American excavators found at least 17 cist graves containing inhumation burials of unknown dating in the general area, of which no traces remain [8]. A quick survey of the fields produced only few and particularly small surface finds. One piece of slag discovered in the area hinted at the presence of a metal workshop at some point, but it remains unclear whether a larger workshop area or necropolis can be located here and to which historical period they might belong. Similarly during a survey of the site of the so-called graves of the 4th c. BC, mentioned by C. Schuchhardt in the east of the part "C" of the fortifications and excavated partially by the Americans in 1922, could be located by the comparison of the landscape with old photographs [9]. No further trace of these graves could be found and their exact location still remains unknown.

3. Documentation of selected houses in the village of Değirmendere

The programme also included the documentation of several historic houses in the modern village of Değirmendere. Three houses were documented in detail for different reasons: 'House 6' was chosen as being representative for the typical local building type of a farmer's house with adjacent working areas (barn, pen and garden). 'House 4' gives an example of an 'Anatolian' house-style with a so called 'hayat'. 'House 17' is a singular type in Değirmendere as it represents a clearly urban style typical of the early 20th century in Izmir. Additionally the single wall 'DO15-4' was documented as it shows an abundance of *spolia* and a building style that might perhaps be older than the surrounding houses. The ground-plan areas and faces of these houses were measured (by a local team of geometers and architects) as well as described and photographed, giving particular attention to the *spolia* found in them. As a whole it could be observed that *spolia* concentrate in the houses in the south eastern part of Değirmendere, directly on the foot of the acropolis, but are much less frequent in the other parts of the village. This indicates perhaps a provenance of ancient building stones from the area of the acropolis.

4. The geo-archaeological survey

The geo-archaeological part of the Colophon project in 2013 was dominated by the lithological characterization of *spolia* in houses of Değirmendere. Additionally, in 2013 several parts of the city wall were re-visited, which virtually comprises Mesozoic limestone and dolomite of the Bornova Melange Zone. Except some very small possible quarries, no large quarries for building stones have been located within the survey area so far. Other than a row of three angle holes on Kalabacık Tepesi, no unequivocal traces of pre-modern quarrying have been found. Most likely the locally abundant Mesozoic limestone and dolomite of the Bornova Melange Zone has been quarried in many different places, mainly splitting the rock at natural fracture and thus leaving no obvious traces of former quarrying. A visit to the volcanic rocks west of Tahtalı Baraj Gölü confirmed the existence of rhyolites, tuff and tuffite, which probably represent the source of the abundant light coloured volcanic building stones at Colophon.

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[1] Ch. Bruns-Özgan – V. Gassner – U. Muss, Kolophon: Neue Untersuchungen zur Topographie der Stadt, Anatolia Antiqua 19, 2011, 199–239; Ch. Özgan u. a., Kolophon Antik Kenti 2010 Yılı Yüzey Araştırmaları, AST 29, 2012, 263–285; V. Gassner – U. Muss – E. Draganits, Survey in Kolophon: Die Kampagnen 2010–2012, Forum Archaeologiae 65/XII/2012 (http://farch.net); Ch. Özgan et al., Kolophon Antik Kenti 2011 Yılı Yüzey Araştırmaları, AST 30, 2013, 195–206.
[2] The 2013 campaign saw the participation of archaeologists Anton Bammer, Verena Gassner, Benedikt Grammer, Martin Gretscher, Ulrike Muss (all Vienna), Olivier Mariaud (Grenoble), together with the students Carina Hasenzagl, Andreas Hochstöger, Jasmin Scheifinger, Sara Wanek, the geologist Erich Draganits (all Vienna), and the geophysicists Sebastian Pfnorr and Torsten Riese (Posselt & Zickgraf Prospektionen Marburg, Germany).
[3] W. Hoepfner, Ionien – Brücke zum Orient (Darmstadt 2011) 123.
[4] V. Gassner – U. Muss – E. Draganits, Survey in Kolophon: Die Kampagnen 2010–2012, Forum Archaeologiae 65/XII/2012 (http://farch.net).
[5] O. Mariaud, The Geometric Graves of Colophon and the Burial Customs of Early Iron Age Ionia, in: A. Mazarakis Ainian (éd.), The Dark Ages Revisited. Acts of an International Symposium in Memory of W.D. Coulson, University of Thessaly, Volos June 2007 (Volos 2011) 785–799.
[6] See Mariaud op. cit. fig.5.
[7] R.A. Bridges jr., The Mycenaean Tholos Tomb at Kolophon, Hesperia 43, 1974, 264–266.
[8] O. Mariaud, Necroionia. Archéologie, espace et société. Recherches sur les nécropoles et les sociétés d'Ionie à l'époque archaïque (700-500 av. n.è.). Tome 2 (Diss. Univ. Bordeaux 2007) 67.
[9] C. Schuchhardt, Kolophon, Notion und Klaros, AM 11, 1886, 398-434, esp. 403.

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